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(54) METHOD FOR PRODUCING POLYGLUTAMIC ACID THROUGH FED BATCH CULTURE OF BACILLUS LICHENIFORMIS

(57) Abstract:

PURPOSE: Provided is a method for producing polyglutamic acid with low production cost through fed batch culture of Bacillus licheniformis by controlling substrates of citric acid and maintaining low viscosity of the acid until the strain grows.

CONSTITUTION: A method for producing polyglutamic acid is comprised of the next steps of: i) cultivating Bacillus licheniformis in E medium lacking citric acid, but having 40g/L of glycerol, 125g/L of L-glutamic acid, 250g/L of citric acid, 3g/L of CaCl₂ 2H₂O, 3g/L of MnSO₄ 5H₂O, 500g/L of glycerol, and 3g/L of MgSO₄ 7H₂O at 37 deg.C at pH 6.5-6.7; ii) adding citric acid to the medium; and iii) measuring the production of glutamic acid and cell condensation 9 hours later. Wherein, pH is controlled by 25% ammonia and 2M HCL while dissolved oxygen is changed by increasing the speed of a stirrer from 400 to 1000rpm. And cell growth is measured by spectrophotometer at 660nm.

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